



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,405	09/04/2003	Choong-Sheek Hong	PO300/US/CS	5453
7055	7590	08/25/2005	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			BHATTACHARYA, SAM	
			ART UNIT	PAPER NUMBER

2687

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/654,405	Applicant(s) HONG, CHOONG-SHEEK	
	Examiner Sam Bhattacharya	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether "the hinge" recited in line 3 refers to the hinge connecting the main body to the upper folder or the lower folder.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US 6,510,325 B1) in view of Lee (US 6,125,289), and further in view of Kim (US 2003/0181228 A1) and Sawai (US 2004/0137958 A1).

Regarding claim 1, Mack discloses a double folder mobile phone including a main body 8; an upper folder 9 connected with an upper part of the main body by a hinge 13, having a speaker 4; and a lower folder 10 connected with a lower part of the main body by a hinge 14, having a plurality of buttons 2. See FIGS. 1A and 3B.

Mack fails to disclose that the main body is provided with a display at the front to provide an image to a user. However, Lee discloses a double folder mobile phone having a main body with a display 15 that provides an image to a user. See FIG. 7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile phone of Mack by providing a display in the main body as taught by Lee so as to reduce redundant components from the upper folder (see Mack, col. 6, lines 60-64).

The combination of Mack and Lee fails to disclose a plurality of buttons on the upper folder. However, Kim discloses mobile phone having a plurality of buttons 260 on an upper folder. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the mobile phone of Mack and Lee by providing buttons on the upper folder as taught by Kim so that a user can input data into the mobile phone even when the upper folder is closed.

The combination of Mack, Lee and Kim fails to disclose a speaker on the lower folder of the mobile phone. However, Sawai discloses a mobile phone with a speaker 151 on the lower folder. See FIGS. 4 and 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile phone of Mack, Lee and Kim by including a speaker on the lower folder for the purpose of adding the functionality of a loudspeaker with the mobile phone when a user desires to listen to an incoming call at a distance from the phone.

Regarding claim 4, Mack discloses an auxiliary display 6 provided on the outer side of the upper folder.

Regarding claim 5, Mack discloses a camera 7 provided on the outer side of the upper folder.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US 6,510,325 B1) in view of Lee (US 6,125,289), and further in view of Kim (US 2003/0181228 A1), Sawai (US 2004/0137958 A1) and Ohta (US 2004/0235539 A1).

The combination of Mack, Lee, Kim and Sawai fails to disclose a switch at the side of the main body that controls a motor on each hinge to automatically folding and unfold the folders. However, Ohta discloses a mobile phone having a side switch 121 on the main body that controls a motor 111 on the hinge 105 to automatically open and close the folder 103. One skilled in the art would be able to extend this concept to a second folder as well. It would have been obvious

Art Unit: 2687

to one of ordinary skill in the art at the time the invention was made to modify the mobile phone of Mack, Lee and Kim and Sawai to include a side switch to control the movement of the folders as taught by Ohta so a user is freed from having to physically move each of the folders.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US 6,510,325 B1) in view of Lee (US 6,125,289), and further in view of Kim (US 2003/0181228 A1), Sawai (US 2004/0137958 A1) and Thompson (US 5,465,401).

The combination of Mack, Lee, Kim and Sawai fails to disclose that the sound volume in the speaker of the upper folder is automatically adjusted. However, Thompson discloses a mobile phone 50 with automatic adjustment of the sound volume of a speaker 53 in the upper part 56 of the phone. See FIG. 5 and col. 10, lines 49-54. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile phone of Mack, Lee and Kim and Sawai by automatically adjusting the sound volume of the speaker, as taught by Thompson, so as to allow a user to hear a caller at a comfortable volume level when the incoming signal level fluctuates due to noise and other causes.

9. Claim 6, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US 6,510,325 B1) in view of Lee (US 6,125,289), and further in view of Kim (US 2003/0181228 A1), Sawai (US 2004/0137958 A1) and McC Estabrook (US 6,052,579).

Regarding claim 6, the combination of Mack, Lee, Kim and Sawai fails to disclose a mobile phone including an antenna having a radial area maximized by the hinge. However, McC

Art Unit: 2687

Estabrook discloses a mobile phone 100 having an antenna 116 that is retracted by a hinge 106 when the phone is folded and extended by the hinge when the phone is opened. Thus, the radial area of the antenna is maximized by the hinge when the phone is opened. See FIGS. 1 and 2 and col. 4, lines 15-22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile phone of Mack, Lee and Kim and Sawai to maximize the area an antenna by a hinge, as taught by McC Estabrook, for the purpose of freeing a user from having to extend and retract the antenna manually.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kwak (US 2003/0129950 A1) discloses an antenna built into the folders of a mobile phone.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (571) 272-7917.

The examiner can normally be reached on Weekdays, 9-6, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2687

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sb



ELISEO RAMOS-FELICIANO
PATENT EXAMINER